

In the Claims:

Please amend claims 1, 7, 8, 11, 15, 16, and 22, cancel claim 17, and add new claim 26. The status of all claims is as follows:

1. (Currently Amended) A method of filtering transient errors in data-collected comprising:

collecting initial sensor data over a wireless channel from at least one sensor;

correlating said collected initial sensor data;

receiving additional data over the wireless channel from the at least one sensor;

predicting the transient errors in said received additional data using said correlation correlating of the data; and

correcting the predicted transient errors based at least in part on the said correlation correlating.

2. (Original) The method of claim 1, wherein said correcting includes delaying the data.

3. (Original) The method of claim 2, wherein said delaying the data comprises tuning the amount of delay to a particular wireless sensor network.

4. (Original) The method of claim 3, wherein said tuning the delay comprises forming a prediction history tree.

5. (Original) The method of claim 2, wherein said delaying the data comprises forming a prediction history tree.

6. (Original) The method of claim 1, wherein said correlation includes autoregressive moving average correlation.

7. (Currently Amended) The method of claim 1, wherein said predicting and correcting are performed by a wireless device other than the at least one sensor node.

8. (Currently Amended) A network comprising:

at least one sensor; and

a device configured to receive sensor data over a wireless channel from the at least one sensor, the received sensor data including initial sensor data and additional sensor data;  
said device being configured to generate offline a predictive model at least partly based on per-node sensor redundancy in the initial sensor data received via at least one sensor of the network;

the said device further configured to determine partly based on the predictive model whether to correct observed the additional data received via from the at least one sensor.

9. (Original) The network of claim 8 in which the at least one sensor is one device.

10. (Original) The network of claim 8 in which the predictive model is a linear model.

11. (Currently Amended) A device, comprising:

first logic configured to generate offline a predictive model at least partly based on per-node redundancy in sensor data received wirelessly from at least one sensor node; and  
second logic configured to determine while online partly based on the predictive model whether to correct additional observed data received wirelessly from the at least one sensor node based on the predictive model.

12. (Original) The device of claim 11 wherein the first logic includes at least a portion of the second logic.

13. (Original) The device of claim 11 wherein the second logic includes at least a portion of the first logic.

14. (Original) The device of claim 11 wherein the first logic and the second logic do not overlap.

15. (Currently Amended) A method for improving reliability of collected sensor data over a network, the method comprising steps of:

~~by a device other than a sensor node,~~

wirelessly collecting initial sensor data from one or more sensor nodes in the network;

pre-processing of the initial sensor data to determine a level of inherent temporal redundancy in the initial sensor data;

developing a predictive model based upon the determined level of inherent temporal redundancy in the initial sensor data;

~~by a device other than a sensor node,~~wirelessly receiving an additional sensor reading from the one or more sensor nodes;

~~computing the a likely value of a~~the next additional sensor reading from a sensor node in the network based upon the predictive model;

~~determining whether a value received from of the sensor node additional sensor reading~~ is reliable with respect to the likely value, and, if not, correcting the value received from of the additional sensor node reading.

16. (Original) The method of claim 15, wherein said collecting initial sensor data, said pre-processing of initial sensor data, and said developing a predictive model are performed offline.

17. (Cancelled)

18. (Original) The method of claim 15, wherein the predictive model comprises an auto-regressive moving average (ARMA) model.

19. (Original) The method of claim 15, wherein said computing the likely value of a next sensor reading is further based on a history of previously-received sensor data and a history of errors.

20. (Original) The method of claim 15, wherein said correcting comprises determining, for a sample n, a corrected value  $Y_C(n-K)$ , where K is a decision delay, in number of samples.

21. (Original) The method of claim 20, wherein said determining a corrected value further comprises forming a prediction history tree including paths representing choices between the value received from the sensor and a predicted value.

22. (Currently Amended) A method for improving reliability of collected sensor data over a wireless network, the method comprising ~~steps of:~~  
~~by a device other than a sensor node,~~  
computing the likely value of a next sensor reading from a sensor node in the network based upon a predictive model based upon inherent temporal redundancy in sensor data;  
wirelessly receiving a value from the sensor node; and  
determining whether ~~a~~the value received from the sensor node is reliable with respect to the likely value, and, if not, correcting the value received from the sensor node.

23. (Original) The method of claim 22, wherein said computing the likely value of a next sensor reading is further based on a history of previously-received sensor data and a history of errors.

24. (Original) The method of claim 22, wherein said correcting comprises determining, for a sample n, a corrected value  $Y_C(n-K)$ , where K is a decision delay, in number of samples.

25. (Original) The method of claim 24, wherein said determining a corrected value further comprises forming a prediction history tree including paths representing choices between the value received from the sensor and a predicted value.

26. (New) The method of claim 15, wherein the one or more sensor nodes comprises a plurality of sensor nodes;

wherein the inherent temporal redundancy in the initial sensor comprises per-node redundancy for each of the plurality of sensor nodes.